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ABSTRACT

This research project delving into sex differences in adolescents' orientations and expectations as regards education utilizes surveys of high school students. The data indicate that both adolescent girls and boys hold the same average post high school plans and receive similar messages from their parents concerning educational aspirations. However, girls who see school as useful were higher on the average in domestic orientation. Tables and references are included. (MML)

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SEX DIFFERENCES IN ADOLESCENTS' ORIENTATION TOWARD SCHOOLING

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Sex Differences in Adolescents' Orientation Toward Schooling*

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The purpose of this study was to examine sex differences in the educational expectations and future orientations of adolescents with respect to their achievement orientations. Educational expectations are an expression of a student's goals and reflect the individual's value for academic achievement. The relevance of one's present behavior to perceptions of the future is important as it relates to the meaningfulness of the individual's current activities. Recently, there has been a greater sensitivity to the achievement of women, and differences in the patterns of achievement in males and females. We might expect patterns of achievement and achievement orientation during adolescence to reflect traditional adult roles, and the degree of change that these roles have undergone in the past few years.

We will examine the future expectations of adolescents and relate these perceptions to present achievement and social variables. Students' educational expectations can also be thought of as a form of achievement. Elder (1968) considers these "status-goals" as expressions of achievement. We will also consider educational expectations as a manifestation of the achievement syndrome or ambition (Rehberg, Schafer and Sinclair, 1970). That is, a student's educational goals may reflect his achievement values. A major explanation often given for sex differences in the academic performance of adolescents is the future orientations of boys and girls. Achievement patterns should reflect one's perception of the future (Douvan and Adelson, 1966; Angrist, 1969). Stinchcombe (1964) states that students who do not see any gain from conforming to the school's demands will not perceive grades as useful. He writes, "high school rebellion, and expressive alienation, occurs when future status is not clearly related to present performance (p.5)." Students' perceptions of the relevancy of their present learning for their futures therefore appear to be a vital area for investigation.

In terms of the future roles of teenagers, it has been stated that males become oriented toward vocational goals while females perceive the domestic tasks of society's projection of the non-achieving woman (Janis, 1969). Douvan and Adelson (1966) emphasize the perception of future roles as influencing present academic performance. Males and females are thus influenced by different drive systems as boys are pressured toward vocations. The theory goes that while boys are worried about their achievement in relation to occupational aspirations, girls are more concerned with affiliation activities. In contrast to boys, girls place a greater value on social relationships in preparation for marriage(Levy, 1972).

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With regard to actual attendance, there is an equal likelihood of higher class boys and girls attending college. But in the lower strata, girls are less likely than boys to get a higher education. The pattern is similar in terms of ability. Boys and girls of high ability are likely to go to college, but low ability boys have a greater chance for higher educational attainments than low ability girls (Werts, 1966; Cross, 1971). However, no sex differences have been found in the relationship of SES and expectations once achievement is controlled for (Douvan and Adelson, 1966; Harrison, 1969).

We might expect that parental expectations would play a role in the plans of their sons and daughters. High school students who perceived their parents as wanting them to have higher educational attainments reported higher educational aspirations themselves. Using data from the Equality of Educational Opportunity Survey, Gordon (1972) concluded that 9th grade boys were more likely than their female counterparts to perceive high parental educational expectations.

There are three aspects of future orientations which will be discussed here in terms of school achievement and sex differences. First, the relevance of one's present behavior to perceptions of the future is important as it relates to the meaningfulness of the individual's current activities. Expectations for the future are also an expression of students' achievement goals. And, finally, the individual's values for academic achievement are reflected in his educational expectations. In the investigation of sex differences in patterns of future orientations, we will relate students' orientations with present academic competence, self-assessment, and perceived parental expectations.

Results

It has been argued that adolescent girls begin to see school as irrelevant to their futures as they prepare for marriage. On the other hand, the literature also states that school becomes more relevant to boys as they orient themselves toward college and occupations. Students in the sample were asked to indicate their agreement with a statement about the usefulness of what they are learning in class for after leaving school.* We should note that this item interprets relevancy in terms of the articulation of the present with the future, and not how meaningful the school situation is to the students' immediate life. Girls actually saw their present learning as more useful to their futures than do boys (τ=5.44, $p < .001$). As shown in Table 1, the average perception of school as useful is greater for girls in every age group. The means for both sexes indicate that students on the average tend to agree that school is useful to their futures. The sex difference appears to be in contradiction to the arguments that the relevance of school will decrease for girls and increase for boys with age. For both sexes, the relevance of school decreases as students get older. This apparently reflects the theme of relevancy which is a part of adolescents' search for identity and is found on college campuses.

*"Not much of what I am learning in classes will be useful when I get out of school."

Table 1

Mean Perception of School as Useful
By Sex and Grade Level

	7th and 8th grades	(N)	9th and 10th grades	(N)	11th and 12th grades	(N)
Females	2.9	(486)	2.7	(513)	2.6	(510)
Males	2.7	(479)	2.5	(522)	2.5	(537)

The next step was to see if this perception of relevancy is related to students' academic competence.* It is clear from Table 2

Table 2

Mean Academic Competence by Perception
of School as Useful by Sex

	Females	N	Males	N
Strongly Disagree	0.35	185	0.19	150
Disagree	0.20	545	-0.16	477
Agree	0.10	361	-0.28	388
Strongly Agree	-0.34	71	-0.65	116

that academic competence increases as both boys and girls see school as more useful to their futures. Conversely, it appears that with higher academic competence, boys and girls see school as more useful to their futures. We should note that the only group of females that is doing worse in terms of academic competence than we would predict by aptitude alone are those girls who strongly agree with the uselessness of school for their futures. And, the only group of boys who are achieving better than would be estimated from aptitude test scores are the males who strongly disagree with the uselessness of school. The frequencies in Table 2 reflect the means in Table 1 in terms of sex differences.

The relationship of articulation of present learning and academic performance can also be explored by sex and age groups. As shown in Table 3, the association of academic competence and perception of school as useful is statistically significant for both sexes and all

* Academic competence is defined here as the difference between actual grade average and predicted grade average, the latter based on the relationship of grades and aptitude test scores for the sample (see Bender, 1976).

Table 3

Correlation of Academic Competence and Perception of School as Useful by Sex and Grade Level

	7th and 8th grades	9th and 10th grades	11th and 12th grades
Females	.22****	.14***	.15****
Males	.20****	.22****	.17****

***p < .005
****p < .001

age groups. With the exception of the middle age group, the correlation coefficients are similar for boys and girls. The greater the academic competence, the more likely adolescents perceive the usefulness of what they are currently learning in class.

Students were asked how far they actually expected to go in their schooling. Note that students were asked to respond in terms of their realistic expectations and not necessarily what their aspirations are. (While our discussion will interpret this variable as "expectations," there is no guarantee that students' aspirations did not influence their responses.)

Table 4 shows the mean educational expectations by age and sex. The means indicate that students on the average expect to attain an educational level between post-high school training and graduation

Table 4

Mean Educational Expectations by Sex and Grade Level

	7th and 8th grades	(N)	9th and 10th grades	(N)	11th and 12th grades	(N)
Females	3.7	(403)	3.5	(451)	3.5	(444)
Males	3.6	(383)	3.6	(457)	3.5	(460)

from a four-year college. There is no statistical difference in the average educational expectations of males and females on the whole (t=0.24). Furthermore, age does not seem to bring out any meaningful differences in mean scores, as shown in Table 4. Both boys and girls experience a very slight decline in expectations between the youngest and oldest age groups. By the 11th and 12th grades, girls and boys have the same mean post-high school expectations. It is perhaps in this oldest age group that we would have expected the greatest sex

difference since at this time the students' plans would be the most realistic in terms of their post-graduation plans. We might predict that students with higher educational expectations would value learning more and perceive more usefulness to their schooling. This prediction is borne out in Table 5 for all age groups of males and females.

Table 5

Correlation of Perception of School as Useful and Educational Expectations by Sex and Grade Level

	7th and 8th grades	9th and 10th grades	11th and 12th grades
Females	.20****	.15****	.15****
Males	.17****	.20****	.20****

****p < .001

Students who see school as useful to their futures do have higher educational expectations. There is a slight difference in the association of perception of school as useful and educational expectations with respect to age and sex. This appears to arise from a slight decline in the relationship for females and some rise with age for males. However, the differences do not appear to be of sufficient magnitude to warrant further discussion.

The relationship of educational expectations and academic competence is shown in Table 6. Although the association is lower for the middle age group, it is significant for all age groups. This had been expected since higher education is dependent to a large extent on prior achievement. We originally thought that this association would increase with age as students increasingly based their future plans on current performance. This is not supported by the curvilinear trend in Table 6. Finger and Silverman (1968) found a

Table 6

Correlations of Educational Expectations and Academic Competence by Sex and Grade Level

	7th and 8th grades	9th and 10th grades	11th and 12th grades
Females	.36****	.24****	.29****
Males	.34****	.24****	.35****

****p < .001

strong relationship between academic plans and school marks in a sample of 6th graders. It appears that students' plans are fairly well established, on the whole, when they enter junior high school. Again, there is apparently not much of a sex difference in the association of academic competence and educational expectations.

This discussion began with a statement that educational expectations could be interpreted as reflecting achievement goals and one's value on education as a form of achievement motivation, in addition to specific plans for the future. To this point, there does not appear to be any evidence to support the idea that females decline in achievement motivation (as operationalized as educational expectations) during adolescence or that their goals for achievement differ much from adolescent males.

The next section of analysis involves parental educational expectations for the students. Just as the students' own expectations were interpreted broadly to include a valuing of achievement, so will the treatment of parental expectations. These expectations are those reported by the students and not the responses of the parents themselves. We are therefore studying the sons' and daughters' perceptions of how their parents value education for them. Thus, in referring to parental educational expectations in this analysis, one whould keep in mind that these may not be what the parents might report. However, the adolescents' perceptions of their parents' attitudes appears to be of greater relevance to this investigation. This is because we are concerned with the adolescent's own interpretation of his student role. As was noted in the discussion of students' expectations, we are dealing with expectations and not aspirations. Again, students' perceptions of parental educational expectations could have been influenced by aspirations.

Tables 7 and 8 show the mean scores by sex and grade level of students' perceptions of parental expectations. The lack of a sex

Table 7

Mean of Perceived Mother's Educational Expectations by Sex and Grade Level

	7th and 8th grades	(N)	9th and 10th grades	(N)	11th and 12th grades	(N)
Females	3.5	(393)	3.4	(458)	3.5	(458)
Males	3.6	(399)	3.5	(463)	3.5	(464)

difference that was found with students' expectations is also apparent in the perceptions of parental expectations (for mother's, t=1.91; for

father's, t=1.15). Although fathers appear to have higher expectations than do mothers, both are similar in average scores and are

Table 8

Mean of Perceived Father's Educational Expectations by Sex and Grade Level

	7th and 8th grades	(N)	9th and 10th grades	(N)	11th and 12th grades	(N)
Females	3.7	(385)	3.6	(431)	3.6	(431)
Males	3.7	(387)	3.6	(437)	3.6	(450)

comparable to students' own educational expectations (Table 4). The similarities in these scores underscore the possibility that students' appraisals of "parental" expectations reflect, to a large extent, their own attitudes. Because of the high correlation between perceived mother's and father's expectations (r=.88), a single measure using the average of the two scores was calculated for the remainder of this section.

The relationship of academic competence and parental value on higher education (as perceived by the students) is shown in Table 9. Studies reviewed by Boocock (1972) have consistently found a relationship between parental aspirations and students' school performance.

Table 9

Correlation of Perceived Parental Educational Expectations and Academic Competence by Sex and Grade Level

	7th and 8th grades	9th and 10th grades	11th and 12th grades
Females	.25****	.22****	.21****
Males	.27****	.18****	.32****

****$p < .001$

This association is quite similar for the younger and middle age groups of boys and girls. However, the relationship of perceived parental expectations and academic competence is stronger for the males than females in the oldest age group. Since girls are higher in average academic competence than boys in this oldest group while having equal mean educational expectations (both own and perceived parental), we can condlude that the expectations of girls are slightly lower than might be expected on the basis of their academic competence.

Since the literature states that girls will begin to view school as irrelevant to their futures as they begin to prepare for marriage and a family, it was decided to relate perception of school as useful to one's future to the domestic orientation of females. Because the items in the questionnaire concerning domesticity were not designed to measure males' attitudes, this section of the analysis will only involve the sample of females.

Domestic orientation is operationalized as a four-item scale consisting of girls' responses to questions on desired family size, age at marriage and satisfaction at having a job while their children are young. A high score on the scale means that the girls are more oriented to earlier marriage, larger families and their prospective families rather than developing careers. This domestic orientation is intended to reflect girls' views toward the traditional female sex role and socialization toward feminine goals. The pattern in Table 10 is linear, though not in the direction expected. Those

Table 10

Mean Domestic Orientation by Perception of School as Useful (Females Only)

Variable #20	Mean	N
Strongly Disagree	13.3	234
Disagree	13.2	673
Agree	12.8	403
Strongly Agree	12.6	80

girls who see school as more useful are actually higher in domestic orientation ($F=2.9$, $p < .05$). Apparently, preparation in one's mind for marriage versus career is not associated with perceiving school as irrelevant to one's future. Following our line of reasoning in investigating age trends after looking at the entire group, we find in Table 11 that, although domestic orientation is associated with perceiving school as useful to one's future, the relationship does not reach statistical significance for the two oldest age groups. We may therefore conclude that domestic orientation is not a very powerful factor as girls age and become more oriented toward their adult roles in terms of seeing their present learning as useful.

Table 11 also shows the relationship of domestic orientation of females and their educational expectations. The association increases with age such that the expected level of educational attainment decreases as domestic orientation increases. Similar to

Table 11

Correlations of Domestic Orientation and Selected Variables by Grade Level (Females only)

	7th and 8th grades	9th and 10th grades	11th and 12th grades
School as Useful	.10*	.06	.05
Educational Expectations	-.03	-.11*	-.23****
Perceived Parental Educational Expectations	-.03	-.05	-.21****
Academic Competence	.05	-.04	-.06

*$p < .05$
****$p < .001$

this is a finding by Bayer (1969) of a high relationship between education aspirations and plans to marry at a certain age. High domestic orientation should not be interpreted, however, in terms of a negative view of present education for the adolescent female. We saw from the perception of school as useful analysis that those females who perceived school as useful tend to be higher in domesticity. We suggest that the negative relationships here merely point out a realistic perspective toward the conflict of marrying young and wanting a larger family with attaining a high level of post-high school education.

Parental expectations for the educational attainment of females show a similar pattern with domestic orientation. Again, this may be more of a reflection of the daughters' plans than of parental devaluing of education resulting in the females being more oriented toward a prospective family.

The relationship of academic competence with domesticity appears to support our interpretation of the educational expectations results. Although none of the correlations are significant, they do go from slightly positive for the youngest females to slightly negative for the older females. Though there is a tendency for domestic orientation to be associated with poorer achievement for the older girls, it does not seem to be of sufficient magnitude to conclude that domesticity causes a drop in achievement. It had been expected that the negative relationship between domesticity and academic performance would be greater for the older students. This could have followed from girls orienting themselves toward marriage because of poor school achievement, or because of socialization into the traditional female role that does not include individual achievement. We suggest that it is poorer academic performance that results in girls lowering their educational expectations and becoming more oriented toward early

family commitments as an alternative to educational pursuits. The pattern of educational expectations seems to provide evidence that this idea is a plausible explanation.

Our final area of discussion relating present behavior to the future concentrates on students' self-assessment of their school work. The rationale for this section rests on the idea that one's belief in the capacity to achieve future levels of success is based on current self-evaluation. Coopersmith (1967) states that "experiences of success lead to expectations of success and that aspirations mirror these expectations (p. 147)." Table 12 summarizes the relationship of accuracy of self-assessment measure used here is based on the accuracy of self-evaluation which means that academic competence is controlled for.

Table 12

Correlations of Self-assessment and Selected Variables of Future Orientation by Sex and Grade Level

	7th and 8th grades	9th and 10th grades	11th and 12th grades
Females			
Perception of School as Useful	.12*	.13	.15****
Educational Expectations	.41****	.35****	.36****
Parental Educational Expectations	.30****	.34****	.30****
Domestic Orientation	-.04	-.12**	-.19****
Males			
Perception of School as Useful	.11*	.04	.08*
Educational Expectations	.33****	.39****	.42****
Parental Educational Expectations	.23****	.36****	.37****

*$p < .05$
**$p < .01$
***$p < .005$
****$p < .001$

The relationship of self-assessment with relevancy of school follows a curvilinear trend that is similar for males and females. There is a tendency for students who over-assess their school performance to see present learning as more useful to their futures. These correlations are smaller than those between academic competence and perception of school as useful with the exception of the oldest group of females. We interpret this to mean that self-assessment plays as large a role in the relevancy of school for older girls as does school performance, with less of a role for the other groups.

Of greater interest here is the strong association between self-assessment and the educational expectations of students and parents. It is dramatic, however, that these correlations are in most cases stronger than those using the academic competence measure, even though the present self-assessment score controls for school performance (Table 6 and Table 9). It therefore appears that present self-assessment plays a greater role in planning for the future than does current academic competence.

Conclusion

The data on educational expectations indicate that adolescent girls and boys have the same average post high school plans. Furthermore, the messages they receive from parents do not indicate any less of an emphasis on females' education than on males'. Our evidence is contrary to the beliefs that girls increasingly see school as irrelevant to their futures as they progress through adolescence. This was further emphasized by our finding that girls who saw school as useful were higher on the average in domestic orientation. It is these findings that lead us to question much of the current literature concerning sex differences and the achievement orientations of females during adolescence.

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